

We Claim:

1. An illuminating device comprising:
 - a substrate;
 - a circuit pattern, formed on the substrate;
 - a light emitting element, electrically connected to the circuit pattern;
 - a reflector, being adhered by an adhesive agent onto the substrate and having a housing portion that houses the light emitting element and a reflecting surface on an inner surface of the housing portion;
 - a visible light converting layer, disposed on the housing portion of the reflector so as to cover the light emitting element; and
 - a lens, adhered onto the reflector by a same type of adhesive agent as the adhesive agent disposed on the substrate.
2. An illuminating device comprising:
 - a substrate;
 - a circuit pattern, formed on the substrate;
 - a light emitting element, electrically connected to the circuit pattern;
 - a reflector, being formed on the substrate and having a housing portion that houses the light emitting element and a reflector-side fitting portion formed in a periphery of the housing portion; and
 - a visible light converting layer, disposed on the housing portion of the reflector so as to cover the light emitting element.
3. The illuminating device according to Claim 2, further comprising:
 - a lens, having a lens-side fitting portion that fits with the reflector-side fitting portion and is welded in a fitted state onto the reflector.

4. The illuminating device according to Claim 2 wherein

the substrate has a plurality of light emitting element positioning portions, at which a plurality of light emitting elements are positioned, and anchoring-portion-provided penetrating holes, formed between the plurality of light emitting element positioning portions, and

the reflector has reflecting portions, reflecting light from the light emitting elements and being formed on the substrate, and supporting portions, formed integral to the reflecting portions by making a resin flow into the anchoring-portion-provided penetrating holes of the substrate.

5. The illuminating device according to Claim 1 wherein

the housing portion satisfies a relationship, $\theta = \tan^{-1}\{h/(A-B)\} > 45^\circ$, where A is an aperture diameter at the lens side, B is an aperture diameter at the substrate side, h is a depth of the housing portion, and θ is an angle of spread of the housing portion from the substrate side to the lens side.

6. The illuminating device according to Claim 1 wherein

the visible light converting layer is formed by dispersing a visible light converting substance in one type of resin among a silicone resin, an epoxy resin, and a modified epoxy resin.

7. The illuminating device according to Claim 1 wherein

two resin layers are formed on the housing portion of the reflector so as to cover the light emitting element,

the visible light converting layer is the upper layer of the two resin layers and is formed by making a visible light converting substance sediment in one type of resin among a silicone resin, an epoxy resin, and a modified epoxy resin.

8. The illuminating device according to Claim 2 wherein

the housing portion satisfies a relationship, $\theta = \tan^{-1}\{h/(A-B)\} > 45^\circ$, where A is an aperture diameter at the lens side, B is an aperture diameter at the substrate side, h is a depth of the housing portion, and θ is an angle of spread of the housing portion from the substrate side to the lens side.

9. The illuminating device according to Claim 2 wherein

the visible light converting layer is formed by dispersing a visible light converting substance in one type of resin among a silicone resin, an epoxy resin, and a modified epoxy resin.

10. The illuminating device according to Claim 2 wherein

two resin layers are formed on the housing portion of the reflector so as to cover the light emitting element,

the visible light converting layer is the upper layer of the two resin layers and is formed by making a visible light converting substance sediment in one type of resin among a silicone resin, an epoxy resin, and a modified epoxy resin.